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Stenozygum (s. str.) *jordiribesi* sp. nov., a new species of Strachiini from the island of Socotra (Hemiptera: Heteroptera: Pentatomidae: Pentatominae)

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Abstract

A new species of Pentatomidae, belonging to the tribe Strachiini of the subfamily Pentatominae, *Stenozygum* (*Stenozygum*) *jordiribesi* sp. nov., is described and illustrated. The new species, easily distinguished by the unique pattern of its coloration and by the shape of its genitalia, was collected by the author on the island of Socotra (Yemen) on *Ochradenus sogotranus* A.G. Mill (Resedaceae).

Key words: Pentatomidae, *Stenozygum*, new species, host plant, Socotra, Yemen.

Resumen

Stenozygum (s. str.) *jordiribesi* sp. nov., nueva especie de Strachiini de la isla de Socotra (Hemiptera: Heteroptera: Pentatomidae: Pentatominae)

Se describe e ilustra *Stenozygum* (*Stenozygum*) *jordiribesi* sp. nov., una nueva especie de pentatómido perteneciente a la tribu Strachiini de la subfamilia Pentatominae. La nueva especie, que es fácilmente distinguible por su singular patrón de coloración y por la forma de su genitalia, fue recolectada por el autor en la isla de Socotra (Yemen) sobre *Ochradenus sogotranus* A.G. Mill (Resedaceae).

Palabras clave: Pentatomidae, *Stenozygum*, nueva especie, planta hospedadora, Socotra, Yemen.

Laburpena

Stenozygum (s. str.) *jordiribesi* sp. nov., Strachiini espezie berria Sokotora uhartekoa (Hemiptera: Heteroptera: Pentatomidae: Pentatominae)

Stenozygum (*Stenozygum*) *jordiribesi* sp. nov., Pentatominae subfamiliako Strachiini tribuko pentatomido berri bat, deskribatu eta irudiztatzen da. Espezie berria, bere kolorazio-eredua eta genitaliaren formari esker erraz bereiz daitekeena, Sokotora uhartean (Yemen) harrapatu zuen egileak *Ochradenus sogotranus* A.G. Mill (Resedaceae).

Gako-hitzak: Pentatomidae, *Stenozygum*, espezie berria, landare ostalaria, Sokotora, Yemen.

Introduction

In April 2008 I had the chance of taking part to an expedition to the island of Socotra organized by the Botanical Garden of the University of Palermo. The island, located along the ideal prolongation eastwards of the Horn of Africa from which it is 240 km away, lies in the Arabian Sea 380 km south of the Arabian

Peninsula. Due to its far distance from the mainland and to its long isolation, Socotra has a fauna and flora particularly rich in endemics. As regards Heteroptera, the island may be regarded as still largely underexplored; no comprehensive work has ever been devoted to them and what is known is scattered in a few papers, mainly Kirkaldy (1899, 1903), Distant (1903), Brown (1956), Linnavuori (1989a, 1994, 1997) and

Moulet (2001). An illustrated review of animals of Socotra as well as natural conditions of the island was provided by Wranik (2003). About 60 species of Heteroptera have been so far recorded, 15 of which are endemic.

Among the material of Heteroptera collected on that occasion I discovered a new species of *Stenozygum* Fieber, 1861, which is described and illustrated below.

The genus *Stenozygum* is a palaeotropical genus presently known to include about 40 species distributed in the southern Palaearctic, Ethiopian, Oriental and Australian-Melanesian Regions. The genus is divided into two subgenera: *Stenozygum* s. str. and *Setozygum* Ghauri, 1972; the latter, distinguished by the jugae longer than clypeus and at least partly enclosing it in front and by the presence of a group of setae on the inner lobes of pygophore, includes only two species, both living in Pakistan: *S. pseudospeciosum* Ghauri, 1972 and *S. constrictus* Ahmad and Khan, 1983.

Taxonomy

Stenozygum (Stenozygum) jordiribesi sp. nov.

(Figs. 1-2)

Type material:

HOLOTYPE: ♂ «Yemen, Socotra island / Hom Hill, 600 m / 4.IV.2008, leg. A. Carapezza // on *Ochradenus saqotranus* A. G. Mill (Resedaceae)» (Coll. A. Carapezza, Palermo).

PARATYPES: 3 ♂♂ and 3 ♀♀, same data as holotype; 12 ♂♂ and 3 ♀♀ «Yemen, Socotra island / Dixam plateau, Firmihin / (*Dracaena* forest), 490 m / 12°68'6N 54°01.1'E / J. Bezděk leg., 15-16.XI.2010» (5 ♂♂ and 2 ♀♀ Moravian Museum, Brno; 5 ♂♂ and 1 ♀ National Museum, Praha; 2 ♂♂ Natural History Museum, London).

Description:

Body ovoid oblong, glabrous, shining, moderately convex. Dorsal surface yellow with well defined metallic blue-violet areas. Punctuation shallow and sparse on pronotum and scutellum, thicker and deeper on hemelytra; punctures concolorous. Head blue except for two raised yellow subtrapezoid areas in subjugal

regions, prolonged anteriorly in two whitish elongate comma-like extensions along inner margins of jugae but not reaching the apex; eyes and ocelli pale brown. Jugae ventro-laterally yellow; bucculae whitish; antenniferous tubercle dorsally blue, ventrally yellow. Antennal joints black, the first three with a metallic greenish tinge. Rostrum black; anterior third of first and second segments white-grayish. Pronotum entirely yellow with two submedian longitudinal bands shaped like double arcs not touching the anterior margin. Scutellum blue with a large median yellow figure shaped like an arrowhead directed posteriad and two yellow roundish spots at the basal angles; apical part with a small preapical blue spot on either margin. Thoracic sterna yellow with blue patches; epimera, episterna, inner and posterior margins of metasterna whitish. Coxae and trochanters pale yellow; femora with proximal half yellow, distal half blue with an incomplete yellow subapical ring; tibiae blue with two longitudinal pale striae, often incomplete, on the external and on the internal surface; tarsi black; claws pale brown, apically black. Clavus blue, in some specimens with a narrow yellow stripe along claval suture; corium blue with two large yellow spots, one median and one preapical, the latter extending partly to exocorium; exocorium blue with basal third yellow; membrane dark fuscous, marginal fourth hyaline, limit contrasted, veins concolorous. Abdomen unicolorous yellow both dorsally and ventrally, except for blue transverse submarginal spots on anterior halves of laterotergites III-VI extending ventrad to the spiracles.

Body 1.85× (♂♂) to 1.90× (♀♀) as long as maximum width of pronotum. Head declivous, 1.50–1.58× as broad across eyes as long, 0.54–0.59× as maximum width of pronotum; eyes moderately stylate, ocular index 3.3 in ♂♂, 3.0 in ♀♀; jugae apically bent ventrad, overlapping clypeus subapically along inner margins, external margins moderately sinuate, apices rounded; clypeus apically free, rounded, slightly surpassing jugae. Total length of antenna 0.90× in ♂♂, 0.80× in ♀♀, as long as basal width of pronotum and 1.55× in ♂♂, 1.50× in ♀♀, as long as diatone; proportions between antennomeres 10:16:20:21:25 in ♂♂, 10:18:20:23:25 in ♀♀. Antenniferes not visible from above. Rostrum extending to hind coxae.

Pronotum medially 1.25× longer than head, 2.2–2.3× as broad as medially long; anterolateral margins almost straight, humeral angles rounded, posterolateral margins slightly concave, posterior margin straight or weakly concave; anterior part of disc with a transverse oval area, distinctly elevated, impunctate,

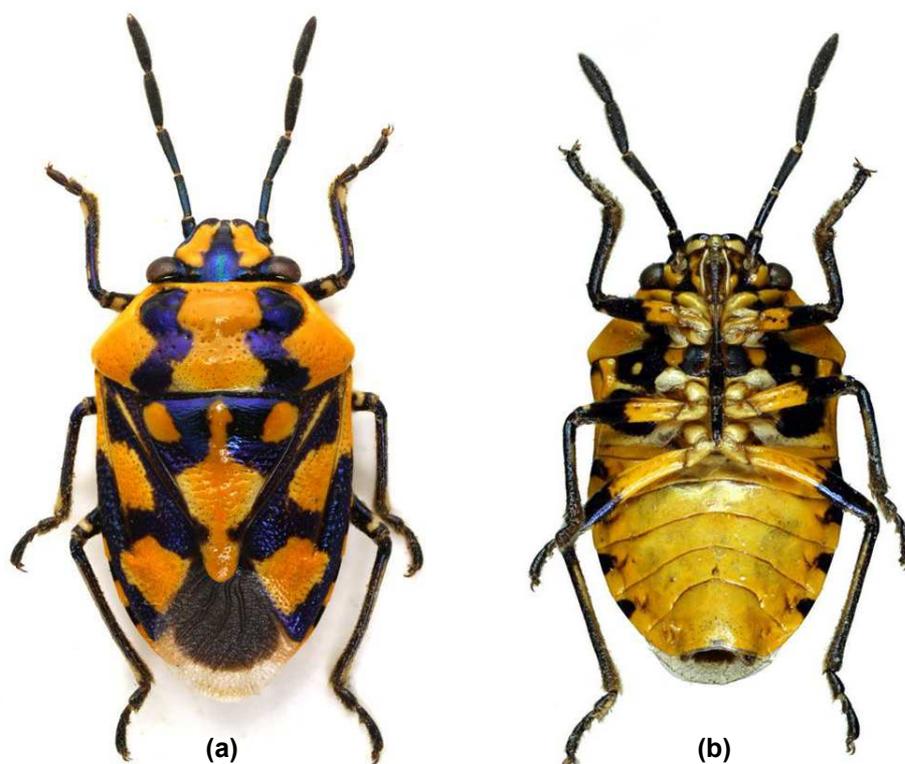


FIGURE 1. *Stenozygum (s. str.) jordiribesi* sp. nov.: (a) Habitus of ♂ in dorsal view; (b) Same in ventral view.

delimited by a deep, punctate furrow; calli crossed medially by a wavy furrow; posterior half of disc with shallow, sparse punctation. Scutellum triangular, about 1.15× as long as wide at base, preapically slightly insinuated, apically subacuminate; anterior third swollen, impunctate, with shallow transverse wrinkles in blue areas. Hemelytra with a deep punctation, coarse on exocorium; membrane passing the abdominal apex. Hind tibiae moderately arcuate in most specimens. Thoracic sterna impunctate except for a few shallow punctures along posterior margins on pro- and metasternum and on mesepisternum. External scent efferent system not discernible.

Abdomen slightly wider than thorax, ventrally entirely impunctate; connexivum almost completely visible from above.

Pygophore small, trapezoidal in ventral view (Fig. 2a), lateral sides rounded; parandria ear-like, very large, projected laterally; phallus as in Figs. 2c-d; paramere robust (Fig. 2e), beak-like, wide basally, narrowing

very gradually and terminating in a finger-like apex in the apical fifth, apex rounded.

External female genitalia as in Fig. 2f; intermediate part of the spermatheca with two distinctly discernible flanges, apical receptacle elongate (Fig. 2g).

Body length 5.7–6.4 mm in ♂♂, 6.8–7.1 in ♀♀.

Etymology:

The new species is dedicated to Jordi Ribes on the happy occasion of his 80th birthday, in appreciation of his important contribution to the knowledge of Mediterranean Heteroptera and as a token of a gratitude for a long friendship.

Biology:

The specimens of the type series to which the holotype belongs were collected beating a bush of *Ochradeenus sogotranus* A.G. Mill (Resedaceae) in a small valley in proximity of a mountain brook (altitude 600 m a.s.l.).

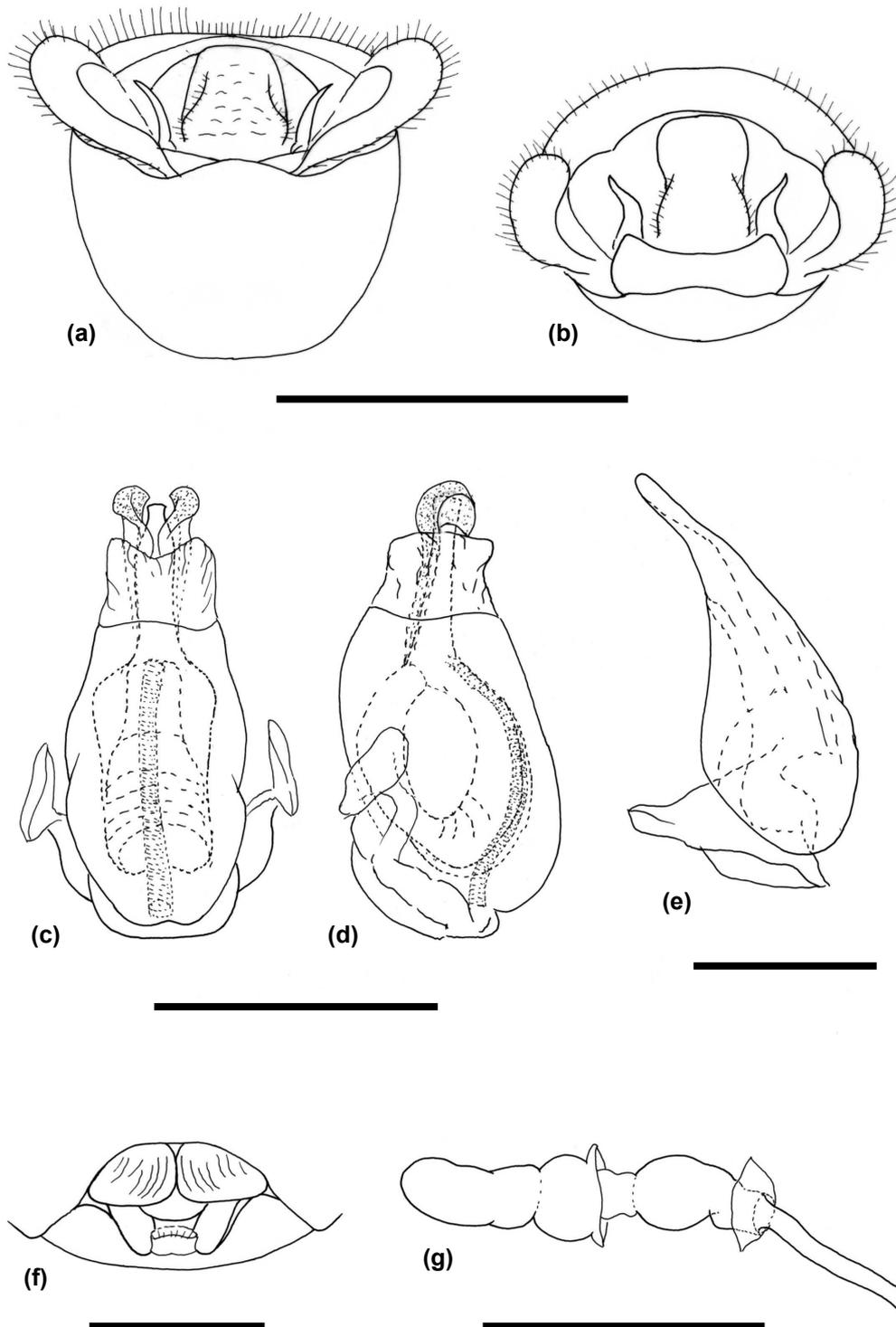


FIGURE 2. *Stenozygum* (s. str.) *jordiribesi* sp. nov.: (a) Pygophore in ventral view; (b) Pygophore in posterior view; (c) Phallus in ventral view; (d) Phallus in lateral view; (e) Paramere; (f) Female terminalia; (g) Apex of spermatheca (Scale bars: (a)-(b), (f) = 1 mm; (c)-(d), (g) = 0.5 mm; (e) = 0.2 mm).

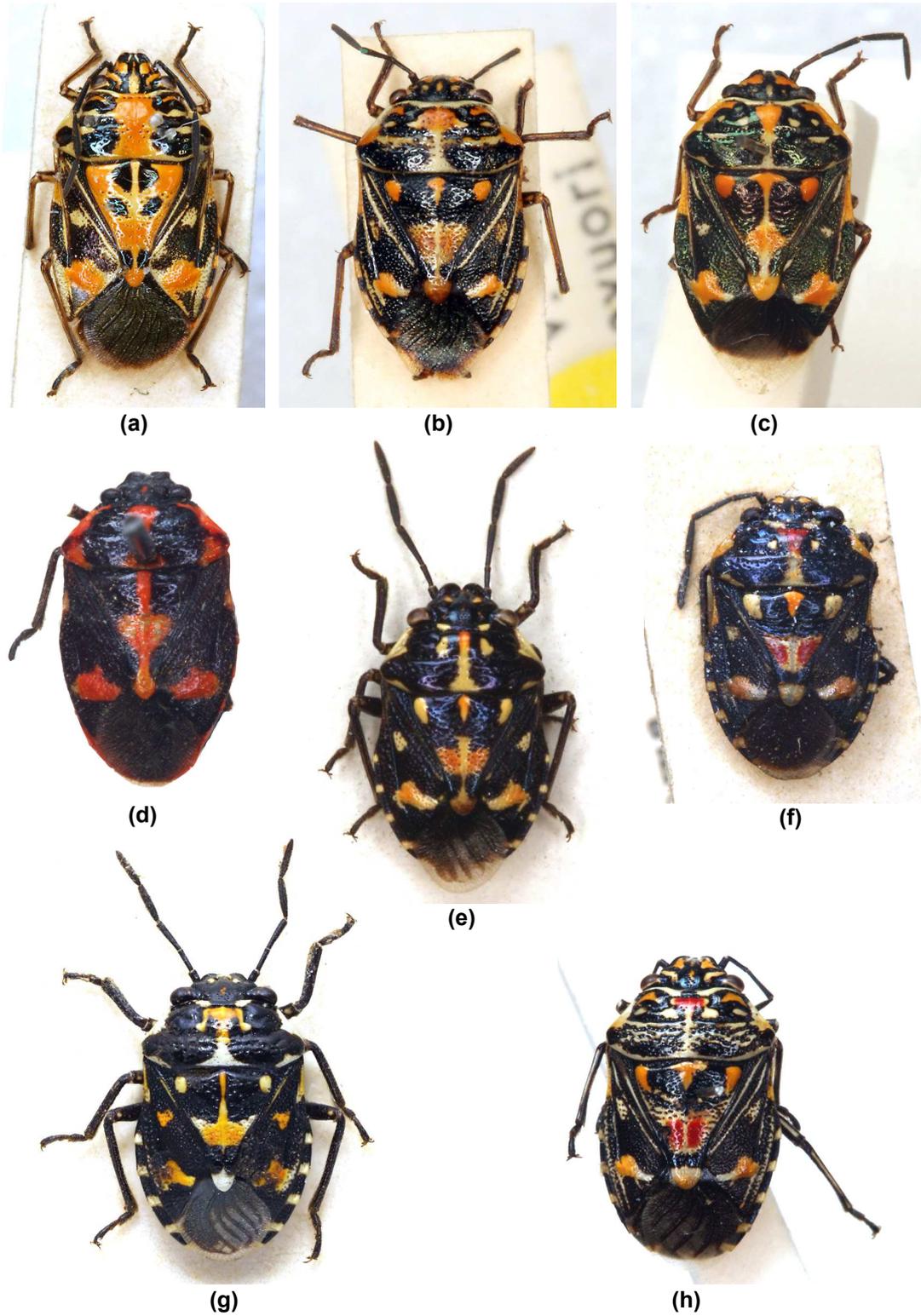


FIGURE 3. *Stenozygum* (s. str.) spp.: (a) *alienatum* (Fabricius, 1803); (b) *alamata* Linnavuori, 1975; (c) *aldabranum* Distant, 1913; (d) *ignitum* (Kiritshenko, 1922); (e) *genale* Linnavuori, 1975; (f) *decoratum* Schouteden, 1902; (g) *coloratum* (Klug, 1845); (h) *poecilum* (Dallas, 1851).

Discussion

Due to the jugae slightly shorter than the clypeus and not enclosing it frontally, *Stenozygum jordiribesi* sp. nov. belongs to the subgenus *Stenozygum* s. str. In East Africa and the Arabian Peninsula, the regions closest to the island of Socotra, the locality where the new species was collected, six species of the genus *Stenozygum* are known to occur: *S. alamata* Linnavuori, 1975, *S. coloratum* (Klug, 1845), *S. poecilum* (Dallas, 1851), *S. alienatum* (Fabricius, 1803), *S. decoratum* Schouteden, 1902, and *S. genale* Linnavuori, 1975. All of them occur in East Africa (Linnavuori, 1975); the first three are distributed also in the Arabian Peninsula (Linnavuori, 1986, 1989b).

Linnavuori (1975: 94) divided those species into two groups: *alienatum* and *coloratum* species-groups. In the species of *alienatum* group the membrane is dark fuscous, marginally narrowly hyaline, with colour boundary contrasted and veins concolorous, the antennae are long, distinctly ($\sigma\sigma$) or slightly ($\varphi\varphi$) longer than basal width of pronotum. In the species of the *coloratum* group the membrane is basally dark fuscous, apically more or less broadly hyaline, with colour boundary not sharply defined and veins dark brown also in the hyaline area, the antennae are short, about as long as ($\sigma\sigma$) or shorter ($\varphi\varphi$) than the basal width of pronotum. All the species discussed in this part are illustrated in Fig. 3.

Stenozygum jordiribesi sp. nov. is intermediate between the two groups: The colouration of the membrane is typical of the *alienatum* species-group, but the antennae shorter than the basal width of the pronotum agree with species of the second group. Even extending the geographical range of the comparison to *S. ignitum* (Kiritshenko, 1922), distributed in Iraq, Iran and Afghanistan, and to *S. aldabranum* Distant, 1913, endemic of Aldabra Islands (Seychelles), *S. jordiribesi* sp. nov. is easily recognizable from all the other species by the unique pattern of its colouration, formed by contrasting yellow and blue areas, the uniformity of yellow colour in pale areas, the greater development of the parandria and the shape of the paramere.

It is very likely that *Stenozygum jordiribesi* sp. nov. is the result of an independent line of evolution within the genus *Stenozygum* linked to the long isolation of the island of Socotra.

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